

Module 10: Operation Plan

This Module is designed so that it can be used for new permit applications and permit revision applications. When using it to complete a revision application, the responses may reference the original approved application or be worded to apply specifically to the new activity or site being proposed. Information submitted under this Module must be certified by a licensed professional engineer.

10.1 Description of Operations

a. Provide a description of operations that will take place under this permit.

- i. If the operation involves underground mining, describe the method of mining (longwall, room and pillar, etc.); the estimated life of the mine; the type of haulage and underground machinery; the maximum number of working faces; the anticipated annual production in tons; the anticipated underground acreage that will be affected each year; surface activity sites and the activities which will take place at each (coal storage, ventilation, rock dust transport, etc.); the means by which coal will be transported from the operation; and the system that will be used to convey mine drainage to treatment. If mining will re-affect existing workings, identify the company that developed those workings and the time frame during which that mining took place.

LCT Energy, LP is proposing an underground expansion to the existing mining operation on the Lower Kittanning coal seam called the Rustic Ridge #1 Mine. The mine continues to be a room and pillar mine and retreat (pillar extraction) mining is not proposed. The proposed underground expansion adds approximately 1,452.0 acres of underground permit area and 1411.5 acres of subsidence control plan area.

This application also proposes to delete approximately 16.2 acres of approved underground permit area and subsidence control plan area which is located on property 013.

Conveyor belt haulage is utilized to transport the coal from the working sections to the surface. Underground machinery to be used includes: two (2) continuous miners, shuttle cars and/or continuous haulage, roof bolters, feed breakers, pumps, battery and diesel scoops, battery and diesel man trips and rock dusters. The mine will employ, at a minimum, two (2) coal producing sections working two (2) shifts per day.

The proposed reserves provide an estimated mine life of approximately 19 years at a production rate of 600,000 tons per year. The mining is anticipated to progress at a rate of approximately 200 acres per year.

No additional surface acres are proposed in this application. No trucks will be permitted within the coal stockpile area. Also, coal material shall not be tracked onto the public road nor allowed to enter erosion and sedimentation facilities.

Waters pumped from the mine will be limited to 1.44 MGD (1000 gpm).

- ii. If the operation involves coal preparation, describe the estimated life of the operation; the types of processing equipment used; media used in separation processes; chemical treatment of coal or refuse; source and quality of make-up water; the means by which coal will be transported to and from site; and whether the facilities are designed to recirculate or discharge water from the coal preparation circuit.

Not applicable. No coal will be processed on site.

- iii. If the operation involves coal refuse disposal:

Not applicable.

- (1) Describe the type of operation (head of hollow fill, cross valley embankment, side hill embankment, ridge embankment, heaped embankment, surface mine backfill, disposal into underground mine workings, etc.); the estimated life of the operation; the type of equipment

which will be used to handle and compact refuse; the systems that will be used to monitor, collect, manage and treat runoff and leachate; and any chemical treatment to which refuse will be subjected (surfactants, bactericides, alkalizing agents, etc.)

- (2) If the operation does not involve disposal in abandoned, inactive or active underground mine or in abandoned or unreclaimed surface mines, outline the technical, economic and safety considerations prohibiting such disposal.
- b. If the operation will involve the discharge of coal processing wastes, underground mine development wastes, coal ash, mine drainage treatment sludge, flue gas desulfurization sludge, or inert stabilizing materials to underground workings:
- Not applicable.
- c. Describe the nature of the material to be discharged, the system which will be used to convey the material to the point of discharge, and the means of controlling the material within the underground workings.
- Not applicable.
- d. If the operation will include the use of fly ash or bio-solids, describe the purpose for which the material will be used and the site(s) on which it will be used.
- Not applicable.

10.2 Existing Structures

- a. List all existing structures which will be used in connection with or to facilitate the mining operation. (Existing structures include roads, bridges, culverts, fills, berms, benches, waste banks, discharge structures, diversions, rail loops, rail sidings, rail spurs, refuse areas, shafts, spoil piles, utility lines, terraces, drains, wells, exploration holes, boreholes, barricades, fences, storage areas, mine buildings, tipples, storage facilities, repair facilities, surge ponds, treatment plants, pipelines, conveyors, and other man-made structures or areas disturbed by mining activities).
- Not applicable.
- b. Provide the following information for each existing structure:
- Location (map reference);
 - Description of current condition;
 - Demonstration of compliance with current design and administrative requirements;
 - If modifications are required to achieve compliance -
 - Design details,
 - Construction schedule,
 - Monitoring provisions, and
 - Demonstration that there will be no significant risk to public health or the environment during the reconstruction period.

10.3 Special Handling of Toxic and Pollution Forming Materials

For each surface mining activity site where earth moving will take place, describe the manner in which toxic or pollution-forming materials will be monitored and handled. (Key to Module 7.6(b) (7))

Not Applicable. The strata to be spoiled on site are net alkaline. Special handling is not required to successfully mine the site.

10.4 Oil and Gas Wells

Where surface mining activities are proposed to be conducted within 125 feet of any oil or gas well, identify the location on Exhibits 6.2, 9.1, and 18.1 and provide a description of the activity. Provide a demonstration that the well has been sealed; or describe the measures to be taken to ensure the integrity of the well, ensure access to the well is provided at all times, and provide notice of the proposed activity to the well owner.

Not applicable. Surface mining activities are not proposed within 125 feet of an oil or gas well.

10.5 Wells, Exploration Holes and Bore Holes

Describe the manner in which, exploration holes, monitoring wells, and exposed underground openings will be cased, sealed or otherwise managed.

All air and core exploration drill holes are shown on Exhibit 9.1. Any well, exploration or borehole will be backfilled utilizing a combination of grout or cement and chips removed from the hole during drilling. In the event of an artesian flow condition, the hole will have a packer installed and be grouted shut.

10.6 Underground Gas Storage Fields

- a. When a storage operator notifies the mining operations that mining activities are within 10,000 linear feet of a storage reservoir and the coal seam being mined extends over the storage reservoir or the reservoir protective area, the mining operations have 45 days to furnish the department and the gas storage operator a map showing the following information:

Not applicable. No known gas storage fields are in the area.

- i. The boundaries of the permitted area,
- ii. All existing and projected excavations of the mine for the next 18-month period,
- iii. The boundaries of the existing and projected workings of the mine for the next 18-month period,
- iv. The boundaries of the completed workings,
- v. The location of any oil or gas wells.

Provide the Department and gas storage operator a revised map every six months thereafter, showing any additional excavations and workings, along with the projected excavations and workings for the next 18-month period that may be within 10,000 linear feet of the storage reservoir. (The Department may require a revised map at intervals that are more frequent if material changes have occurred justifying such earlier filing.)

- b. Provide the Department and the storage operator notification within 30 days when mining activities overlay or are within 2,000 linear feet of a gas storage reservoir.

10.7 Utilities

There are no proposed mining activities that will adversely affect services from utilities.

- a. Where proposed surface mining activities of underground mining operations may adversely affect utility services, the applicant must submit the following information

Not applicable to this application.

- i. A demonstration of the measures that will be taken to minimize damage, destruction, or disruption in services provided by oil, gas, and water wells; oil, gas, and coal slurry pipelines; rail lines; electric and telephone lines; and water and sewer lines that pass under, over, or through the permit area (§87.173(b)).
- ii. An Operations Map (Exhibit 9.1) showing proposed surface mining activities, all features identified in 10.7.a.i. and underground utility right-of-ways or easements. In the absence of an underground utility defined right-of-way or easement or when a total right of way or easement is less than 50-feet wide, depict a surface area boundary of 25-feet on both sides of the utility line.

- b. The applicant is required to submit a written approval from an underground utility line owner when:

Not applicable to this application.

- i. Surface mining activities are proposed within the defined right-of-way or easement of a utility line in accordance with §86.64, unless the mine operator demonstrates a legal right to enter and commence surface coal mining activities. In the absence of a defined right-of-way or easement, or when the total right-of-way is less than 50 feet wide, the Department recommends that a 25-foot barrier on each side of the utility line be maintained, unless the underground utility line owner agrees in writing to a lesser distance.

- c. Where a proposed haul road or access road crosses a pipeline or underground utility line at the intersection of the mine road and a public road, either:

Not applicable to this application.

- i. Demonstrate the crossing will be conducted in a manner that minimizes damage, destruction, or disruption of services provided by the pipeline or underground utility line, or
- ii. Provide written approval from the pipeline or underground utility line owner for the crossing.

Note: A Highway Occupancy Permit issued by the Pennsylvania Department of Transportation would be deemed written approval.

- d. If blasting will occur within 200 feet of a utility line, the permittee must send by certified mail to the utility line owner the following information:

Not applicable to this application.

- i. A written notice that includes an Operations Map (an Exhibit 9 map) clearly showing the location of the blasting activities proposed within 200 feet (60.96 meters) of the underground utility line,
- ii. A narrative description of the proposed blasting activities and the precautions which will be taken to minimize damage, destruction or disruption of services provided by the underground utility line,
- iii. Contact information regarding the District Mining Office to which the blasting activity permit application or blast plan application has been submitted

If the applicant did not send a certified letter to the utility owner, the applicant is required to submit the notification receipts from PA One Call. (The PA One Call notification must include information indicating that blasting will occur).

The applicant must demonstrate that a notice containing information of the proposed blasting and the precautions that will be taken to protect the utility was sent to the underground utility owner by providing the following:

- i. For mining or construction blasting operations where a written notice was sent, a written response from the utility owner along with the notice sent should be included with the blasting activity permit application or blast plan application, or
- ii. For mining or construction blasting operations where a PA One Call notification was provided, the receipt from PA One Call demonstrating notification should be included with the submission of the Blasting Activity Permit application or blast plan application.

The applicant may obtain a written agreement from the underground utility owner when blasting activities will occur within 200 feet (60.96 meters) of the underground utility. The agreement should specify the measures that have been agreed upon to protect the integrity of the underground utility, including, but not limited to precautions to be taken to minimize damage, destruction, or disruption of services provided by the underground utility. The applicant must provide the Department with a copy of the written agreement from the underground utility owner.

Note: Prior to commencing blasting operations as described in the agreement the applicant must obtain Department approval.

- e. If the applicant does not obtain a written agreement from the underground utility owner, and approval from the Department, blasting operations must be conducted in accordance with 25 Pa. Code §211.182. Section 211.182 requires the following:

Not applicable to this application.

- i. Blasts are designed to provide the greatest relief possible in a direction away from the utility line,
- ii. Borehole diameters of 3 inches or less,
- iii. The maximum blast-hole depth should be no greater than one-half the horizontal distance from the underground utility once the excavation reaches the elevation at the top of the utility.
- iv. The blasts must be designed to keep the resulting vibration and actual ground movement to the lowest possible level.

Notes: The Department has determined that four (4.0) inches per second is an acceptable low vibration level, because it sufficiently limits ground movement to protect most underground utilities.

The Department may approve a higher vibration limit if the applicant submits information regarding the construction or condition of the utility that demonstrates to the Department that the higher vibration level will not damage the underground utility.

The Department may require a lower vibration limit when necessary to prevent damage to utility.

For additional information, see Technical Guidance Document Blasting near Utility Lines and Construction Sites and Bituminous Coal Mining within the Right-of Way or Easement of Utility Lines (562-2112-503). Copies of the guidance are available on PADEP's eLibrary.

10.8 Storage Tanks

- a. Will any aboveground storage tanks be located within the proposed permit area? ☐ Yes ☒ No

If "yes", how many? No new aboveground storage tanks are proposed.

A "Mining Tank Inventory Report" form (5600-FM-MR0449) must be completed and submitted for each tank identified in this section as part of this application or within 45 days of installation of the tank. More information is available in the Technical Guidance "Aboveground Storage Tanks on Coal Mine Permit Areas", TGD No. 563-2112-101.

If aboveground storage tanks will be on site, identify the location on Exhibit 9.1 Operations Map and provide details on the following:

- i. Procedure for leak detection
- ii. Appropriate security to prevent vandalism
- iii. A plan for routine maintenance
- iv. Practices to avoid spills and overfilling
- v. Labeling or marking the components of the tank system
- vi. A plan for tank closure
- vii. A cleanup plan in the event of a spill
- viii. Record keeping
- ix. The name and telephone number of the person to be notified in the event of a leak or spill
- x. The name and phone number of the local emergency medical unit.

- c. Are any underground storage tanks located on this site? ☐ Yes ☒ No

If "yes" provide a description of each and identify the location(s) on the Exhibit 9.1 Operations Map.

Note: Underground storage tanks are subject to the requirements of the Storage Tanks and Spill Prevention Act. Information for underground storage tanks may be obtained from the PADEP, Bureau of Waste Management, Division of Storage Tanks in Harrisburg, PA

10.9 Sanitary Facilities

If sanitary facilities will be provided, identify their location and describe the means of sewage disposal. If an on-lot system will be used, obtain a permit from local Sewage Enforcement Officer. If sewage will be treated and discharged to surface water, a NPDES permit must be obtained through a regional water quality office.

Sanitary facilities for this facility are currently permitted with an on-lot system design for the operation. The system is approved under Water Quality Management permit WQG01651501 and NPDES permit PAG046452. The current system will not require any modifications with this proposed application.

10.10 Fire Hazards/Combustible Materials

- a. Identify any material which has a low ignition point or otherwise poses a potential fire hazard that will be stored or disposed of at any surface activity site. Describe the measures and contingency plans which will be used to prevent the sustained combustion of these materials and ensure that they are isolated from coal refuse and exposed coal seams.

There are a few ASTs (diesel fuel, oils and gasoline) in the supply yard. The tanks will be marked to identify substance along with "No Smoking" or "No Open Flame" signs to prevent ignition.

- b. If coal refuse is present at any surface mining activity site, indicate whether there are any known hot spots or fires present within it. If hot spots or fires are present, describe the actions that have been or will be taken to extinguish these areas, the projected date for completion of those actions, and the monitoring and surveillance measures that will be used to determine the success of remedial actions and detect future problems.

Not applicable.

- c. If coal refuse will be disposed of in a fill or embankment under the permit, describe methods or techniques, which will or can be employed to prevent spontaneous combustion within the pile.

Not applicable.

10.11 Fish and Wildlife Protection

- a. State whether or not any habitats of unusually high value (e.g. wild trout streams, wetlands, riparian areas, cliff/caves supporting raptors, areas offering special shelter or protection) have been identified within or adjacent (within 1,000 feet) to the proposed mining activity. If any have, identify the habitat and include it within your response to 10.11(b).

Not applicable to this application. There are no new surface activities with this application.

- b. Describe the measures which will be taken during the development and active phases of operation to minimize disturbances and adverse impacts to fish, wildlife and related environmental values, and achieve enhancement of the resources where practical. If enhancements measures are not proposed, explain why enhancement is not practical. (89.82(a) & 89.74 (b))

10.12 Non-Coal Wastes

Identify all non-coal waste materials and quantities of each that will be generated annually at this facility, including but not limited to, grease, lubricants, paints, chemicals, flammable liquids, tires, garbage, and other hazardous wastes. Describe how and where each waste will be generated, stored, and disposed. (Note: All wastes are to be managed according to the Solid Waste Management Act. Refer to 25 Pa. Code 87.136, 89.63, and 90.133.)

Garbage will be collected and deposited in a dumpster. Collection arrangements will be made with a local municipal waste hauler for transportation and disposal in an approved landfill. Used grease, oil, and other lubricants generated during the standard maintenance of on-site equipment will be disposed of by a contracted service provider. Any materials generated will be removed from the site and disposed of in an appropriate manner. It is not anticipated that other types of waste will be generated. If these wastes are generated, they will be disposed of in an appropriate manner.